Abstract View

A NOVEL DOPAMINE D3 RECEPTOR ANTAGONIST (SB-2770110-A) ATTENUATES ETHANOL CONSUMPTION IN ETHANOL PREFERRING (P) AND NON-PREFERRING (NP) RATS.

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The mesolimbic dopamine (DA)system plays an important role in mediating addiction to alcohol and other drugs of abuse. The DA D2 receptor family in particular is involved in alcoholism and has promulgated research as to the specific molecular mechanism(s) involved. The present study examined the effects of acute selective antagonism of the DA D3 receptor on ethanol consumption in alcohol Preferring (P) and Non-Preferring (NP) rats. We employed the two-bottle choice paradigm to monitor ethanol consumption in these rats before and after treatment with 3, 10, and 30 mg/kg (ip) of the novel selective DA D3 receptor antagonist SB-277011-A. These results indicated a significant attenuation in % ethanol preference and ethanol intake in P rats treated with 10 and 30 mg/kg SB-277011-A. In addition, NP rats showed a reduction in ethanol intake and lick responses at the 30 mg/kg dose. All animals receiving SB displayed a stable lick response-volume ratios and lick response time distributions, suggesting that SB is not producing a significant alteration in motoric activity. These results support the notion that the DA D3 receptor is important in mediating the addictive properties of alcohol and suggests that selective DA D3 receptor blockade may constitute a new and useful target for prospective pharmacotherapies of addiction to alcohol.
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